





WISCONSIN NRCS WETLAND EASEMENTS

WORKING FOR YOU

Over 25 Years of Wetland Restoration Success



In 1992, **WSCONSIV** became one of the first states to implement a new wetland restoration and protection program through the U.S. Department of Agriculture, Natural Resources Conservation Service (NRCS), known as the Wetlands Reserve Program (WRP). Over a few years, the program gained momentum, and is still going strong under a new title, the Agricultural Conservation Easement Program–Wetland Reserve Easements (ACEP-WRE). This program, along with another easement program, the Emergency Watershed Protection Program–Floodplain Easements (EWPP-FPE), are providing wetlands working for you. Wisconsin NRCS has partnered with private landowners across the state to restore and/or protect over 68,000 acres of wetlands and related habitats that deliver an array of ecosystem services for generations to enjoy.







WRE WETLANDS PROVIDE LONG-TERM BENEFITS ON A LANDSCAPE SCALE:

Zandowners



- Alternative for frequently flooded cropland
- Diversify economic portfolio
- Allow for compatible uses that benefit wildlife e.g. haying, select timber harvest
- Private hunting & fishing

Environment



- Wildlife habitat
- Erosion control
- Endangered species conservation
- Improves water quality
- Carbon sequestration
- Replenish groundwater

Community



- Outdoor classrooms
- University research
- Wildlife observation
- Supports local jobs
- Flood protection
- · Game animal habitat
- Aesthetic value

USDA-NRCS EASEMENT PROGRAMS

Congress first authorized the Wetlands Reserve Program (WRP) in the 1990 Farm Bill and Wisconsin adopted the program as one of nine pilot states in 1992. WRP was reauthorized in the next three Farm Bills with little change until the 2014 Farm Bill, which reorganized the program under the Agricultural Conservation Easement Program—Wetland Reserve Easements (ACEP-WRE). The two programs, WRP (retired) and ACEP-WRE (current), function identically as voluntary, incentive-based federal programs that offer private landowners the opportunity to protect, restore, and enhance wetlands on their property. A sister program, the Emergency Watershed Protection Program-Floodplain Easements (EWPP-FPE) specifically benefits lands prone to damage or flooding due to a natural disaster or dam breach.

Since its inception in 1992, NRCS Wisconsin has protected, restored, or enhanced over 63,000 acres of land through WRP and WRE, and over 5,500 acres through EWPP-FPE.

These three federal easement programs incentivize farmers to retire marginal or frequently flooded lands from agriculture by establishing conservation easements on their property. The technical and financial assistance provided by NRCS is intended to engage landowners, especially in the agricultural community, in environmental conservation, while also allowing them to diversify their economic portfolio.









Wisconsin NRCS wetland easements have the potential to accumulate over 300 million pounds of sediment annually. That's enough sediment to fill over 9,200 dump trucks!

WISCONSIN'S WETLANDS

Wetlands are among the most productive ecosystems in the world, comparable to rain forests and coral reefs.¹ Over the past 25 years, NRCS staff, through WRP, ACEP-WRE, and EWPP-FPE have worked with over 900 private landowners on 695 projects across Wisconsin to help maintain, restore, enhance, and protect 68,000 acres of these unique communities. The goal of NRCS ACEP-WRE is to improve wetland functions and values, and to optimize wildlife habitat by providing financial and technical assistance to private landowners interested in conservation. This voluntary approach over the last 25 years has brought wetlands and the habitats they support to the forefront of conservation efforts in Wisconsin.

Despite this growing interest in wetland conservation, the U.S. Fish and Wildlife Service (USFWS) National Wetlands Inventory finds that between 2004 and 2009 there was an average annual loss of 13,800 acres of wetland. Historically, Wisconsin alone had over 10 million acres of wetlands, of which approximately 5 million remain.² Many of those remaining wetlands have been altered, which reduces their quality and function.



















ECOSYSTEM SERVICES

Ecosystem services are the conditions and processes by which natural ecosystems and their species sustain and fulfill human needs.³ Healthy wetlands are very biologically and hydrologically diverse. They support an array of ecosystem functions including flood damage reduction and prevention, water storage, and filtration of excess nitrogen and phosphorus. Wetlands perform these essential services at no cost in the rural landscape whereas municipalities must rely on expensive water treatment plants and flood control infrastructure. Wetlands function as natural sponges that absorb and slowly release water back into the landscape. This prevents flooding by distributing the water slowly over a larger area. This process also recharges groundwater aquifers by storing water long enough for it to percolate through the soil.

Wetlands are also referred to as "Earth's Kidneys" because just as kidneys filter toxins from the body, wetlands filter sediments and excess nutrients, such as nitrogen and phosphorus, from the landscape. These excess nutrients can cause harmful algal blooms in Wisconsin's lakes and rivers. Algal blooms are often composed of cyanobacteria, which can produce toxins that cause skin irritation, contaminate drinking water, and pose a nuisance to recreational boating, fishing, and swimming. Additionally, when these algal blooms die and decompose, they deprive the water of oxygen and produce dead zones as far down the watershed as the Gulf of Mexico. Wetlands enrolled in NRCS's WRP and ACEP-WRE programs can reduce the harmful effects of excess nutrients in Wisconsin waters as well as lower watersheds of the Mississippi River and Lake Michigan.















Wisconsin's NRCS wetland easements provide ecosystem services valued at over \$11.8 million for flood control, \$1.5 million for water supply, and \$6.7 million for nutrient recycling per year.

CARBON SEQUESTRATION

Carbon sequestration in wetlands is a natural process that removes carbon dioxide from the atmosphere and stores it in plants and soil. Wetlands form the largest carbon pool of any North American ecosystem, and sequester more carbon than forest, cropland, or grazing land.⁴ Restoring previously drained wetlands allows the plants and soil to capture and store carbon from gasses that contribute to climate change. Estimates show that NRCS wetland easements in Wisconsin can potentially sequester over 193 million pounds of carbon per year. The same amount of annual carbon emissions are produced by over 18,000 cars!













ENDANGERED AND RARE SPECIES

Wisconsin easement lands provide habitat for a variety of Wisconsin species with low or declining populations. In Wisconsin, 84 species of birds, 14 species of mammals, and 27 species of fish are considered Species of Greatest Conservation Need. WRP, ACEP-WRE, and EWPP-FPE acreage provides critical habitat such as nesting sites, feeding opportunities, and protection from predators for many of these at-risk species. One such species, the Federally Endangered Whooping Crane, has been documented using NRCS easements across the state. Researchers from the International Crane Foundation in Baraboo, Wisconsin, and the Wisconsin Department of Natural Resources (WDNR) observed Whooping Cranes on 48 easements between 2002 and 2017. Other threatened, endangered, or special concern species have also been documented on Wisconsin NRCS wetland easements. Species include bald eagles, American peregrine falcons, trumpeter swans, karner blue butterflies, rusty-patched bumble bees, eastern prairie white fringed orchids, Blanding's turtles, and wood turtles.

















POLLINATORS

Native Wisconsin pollinators, like bumble bees and monarch butterflies, thrive in restored habitats and support adjacent working lands by contributing to higher fruit set and crop yield. In Wisconsin, pollinator dependent crops such as cranberries, apples, green beans, and cucumbers account for over \$55 million in annual production. Globally, pollinator services provided by wild bees are valued at \$1,200 per acre on average for pollinator-dependent crops. Even for a non-pollinator-dependent crop such as soybean, preliminary research suggests that insect pollinator presence may lead to improved crop quality and increased yields. 10, 11

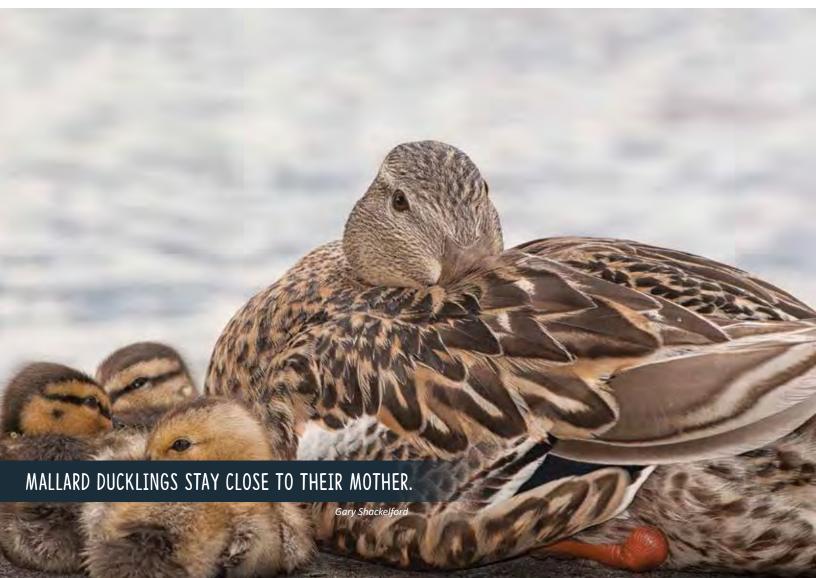
Historically, WRE restoration projects have primarily focused on the wetland portion of the landscape by restoring hydrology and creating habitat for wetland species. However, studies now recognize the importance of high quality upland buffer habitat adjacent to wetland restoration projects.¹² These higher, drier terrains benefit adjacent wetlands by stabilizing banks to reduce erosion, filtering surface runoff, providing critical habitat for nesting waterfowl, providing full life cycle habitat for amphibians and reptiles, and providing food for native pollinators.

Uplands comprise nearly 20% of the total NRCS wetland easement acreage, with over 50% of the easements containing an upland component. Higher-quality seed mixes are partnered with a more holistic approach to restore both the upland and wetland components of the landscape. This investment in uplands protects the wetlands while providing supplementary habitat for wildlife and aesthetic benefits for landowners.









WATERFOWL

It is estimated that up to 85% of the mallards that are harvested in Wisconsin in the early fall are hatched and raised on Wisconsin and other lake state wetlands.¹³ With the decline of habitat, NRCS easement wetlands are becoming even more critical in supporting local waterfowl populations. Although most of Wisconsin's wetland easements are privately held, approximately 40 easements spanning over 13,000 acres are open to the public through the WDNR, the USFWS, or county governments. Both publicly and privately-owned WRP/ACEP-WRE lands provide critical nesting and refugia habitat for Wisconsin's waterfowl. Several publications have mentioned NRCS easements as essential to other programs and landscape-scale plans.¹⁴



BENEFITS TO LOCAL ECONOMY

Wetland restoration projects support Wisconsin's economy by employing local contractors and purchasing local materials. Industries that benefit from restorations and subsequent management practices include earthwork contractors, seed suppliers, plant nurseries, land management companies, surveyors, biologists, and engineers. Over the last 25 years, easement programs have contributed almost \$20 million to the Wisconsin economy.







COSTS

When wetlands are altered for agricultural use, they are typically drained and leveled to facilitate cropping or grazing. Thus, wetland restoration projects are often designed to reintroduce a variety of hydrologic and topographic features back into the landscape. To achieve these goals, NRCS utilizes engineered infrastructure such as dikes, low berms, diversions, grade stabilization structures, and water control structures, as well as de-leveling features such as depressions, wildlife islands, swales, and sloughs. Federal funds provided through the easement programs are used both to secure land acquisitions and to implement the infrastructure necessary for successful wetland restorations.

COST INCREASE OF EASEMENT ACQUISITION AND RESTORATION

FISCAL YEAR ▶	1992-2003	2004-2013	2014-2017
EASEMENTS ACQUIRED	398	261	36
ACRES ACQUIRED	37,498	28,304	2,592
ACQUISITION FUNDS	\$35,867,914	\$98,746,000	\$9,391,011
ACQUISITION \$/ACRE	\$957	\$3,489	\$3,623
RESTORATION COSTS	\$7,204,389	\$7,107,505	\$1,331,186
RESTORATION \$/ACRE	\$198	\$262	\$513

ACQUISITION AND RESTORATION DATA FROM 1992-2003 WAS PROVIDED COURTESY OF EMILY C. STEEL, MASTER'S THESIS, UW-MADISON. DATA FROM 2004-2013 WAS PROVIDED BY THE NATIONAL EASEMENT STAGING TOOL (NEST). DATA FROM 2014-2017 WAS PROVIDED BY NEST AND NRCS YEAR-END REPORTS.

The large increase in acquisition cost per acre can likely be attributed to the increase in average farm real estate value which has risen from \$870 per acre in 1992 to \$4,025 per acre in 2017. ^{15, 16} Conversely, the higher restoration cost per acre is likely the result of a variety of factors. More recent restoration projects typically incorporated more robust engineering projects (scrapes, embankments, ditch fills) as well as more diverse upland seed mixes than older restorations. Investing more during the initial restoration should result in a more stable, higher-quality, restored wetland landscape that will provide wildlife habitat and ecosystem services for generations to come.





PARTNERSHIPS

The agency's primary partners are Wisconsin's private landowners. NRCS also partners with other Wisconsin wildlife and conservation organizations to protect, enhance, and restore wetlands across the state. Effective working relationships with Pheasants Forever, Ducks Unlimited, Wisconsin Wetlands Association, Wisconsin Waterfowl Association, Wisconsin Department of Natural Resources, the Oneida Nation, and others, are vital to the NRCS's success. These partners provide funding to our easement programs, valuable expertise, and critical support.









RESEARCH

NRCS Wisconsin strives to work with partners through various agreements. NRCS collaborates with researchers from the University of Wisconsin (UW)–Steven's Point and the UW–Madison to provide science-based monitoring and management. This partnership helps guide future plans, determine measures of restoration success, and provide recommendations for the future of wetland easement programs.













Every year, Wisconsin NRCS wetland easements have the potential to remove over 56 million pounds of nitrogen and 730,000 pounds of phosphorous from urban and agricultural runoff.

NRCS EASEMENTS ARE A TRIPLE WIN FOR WISCONSIN

Restoration programs such as WRP, ACEP-WRE, and EWPP-FPE provide a financial solution to Wisconsin landowners who are struggling with frequently flooded, marginal croplands. These programs also reduce costly payouts from the federal crop insurance program, which benefits Wisconsin taxpayers. The habitat and ecosystem services provided by these restored wetlands deliver benefits to countless species. Overall, NRCS easements are a win-win-win for Wisconsin's landowners, taxpayers, and wildlife. Thank you to all participating landowners and partners for over 25 years of successful private lands conservation on wetlands.









SUCCESSFUL EASEMENT HIGHLIGHTS

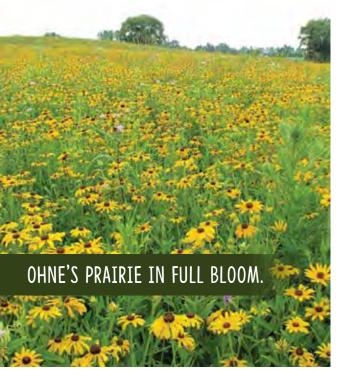
NRCS easement programs are a success because of cooperating Wisconsin partners and landowners. Learn about some of the successful projects and meet cooperating landowners who have partnered with NRCS to restore and preserve their wetlands.

MEET OHNE RAASCH

Restoration Leads to Flourishing Wetlands

When land floods more often than it grows crops, why not let it go back as nature intended, to a flourishing wetland. Ohne and Karen Raasch, of Lake Mills, Wisconsin, had goals to do just that with a 155-acre property they purchased. NRCS partnered with Ohne to acquire a permanent easement through the former Wetland Reserve Program (WRP), now known as Wetland Reserve Easements (WRE), and then completed the restoration through a long-term agreement. "The land was previously being cropped; part of the farmland was showing signs of erosion; some conservation needed to be done," explained Ohne. The local NRCS Service Center worked with Ohne to develop a restoration plan for their property. The restoration started by Ohne seeding highly eroded fields with native, local seed. Then, excavators dug and scraped 13 shallow ponds to remove sediment deposited from the upland crop fields. They filled in 4 ditches and a small diversion; holding that water on the cropland and halting runoff. Lowland areas are now restored wetlands with open water areas that will soon revegetate with wetland plants. Upland areas were seeded, oak and cherry hardwood trees were planted, and two small food plots for wildlife, including corn and soybeans, were also planted. Those crops are left over winter, to provide food and shelter for wildlife. Ohne and Karen are happy with the results and excited to continue managing their land in the future.









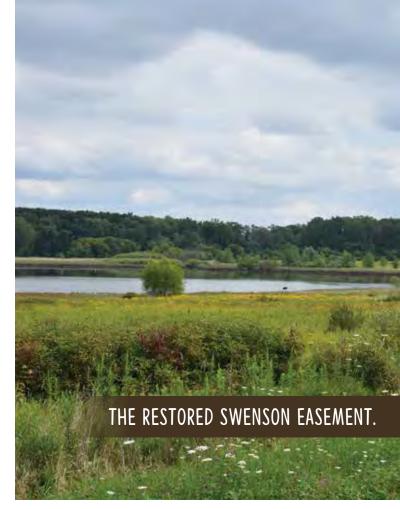
MEET NICHOL AND CRAIG SWENSON

Flyways Waterfowl Experience Directors Restore Wetlands

In 1999, Craig and Nichol Swenson, of Columbia County, Wisconsin, bought property in Baraboo. They are also Directors of the Flyways Waterfowl Experience open to the public on Highway 136 south of Baraboo. The Swenson property was enrolled in the NRCS Wetland Reserve Program (WRP) in 1998, but restoration work had yet to start when they acquired the property. They were excited to restore their acres and actively manage their land through WRP. Craig and Nichol own 23 acres of the WRP and three other neighbors own the rest of the 80-acre easement. The Swenson land was previously conventionally farmed and corn was always grown. The erosion was vast and flooding was a constant concern. Craig and Nichol worked with NRCS and other partners to fill two drainage ditches and install an overflow structure on their easement property. Since the successful restoration, the landowners are able to view many diverse wildlife and pollinator species daily. The Swensons utilized state resources to initially seed the grasslands surrounding the wetland restoration with native, pollinator-friendly, grasses and forbs. The Swensons also complete active burning and mowing practices; maintenance done by themselves. These management practices restore the prairie and help rid it of invasive species. They are also taking measures to control invasive carp in the marsh. The Swensons look forward to enjoying their land and doing active management to keep it thriving.



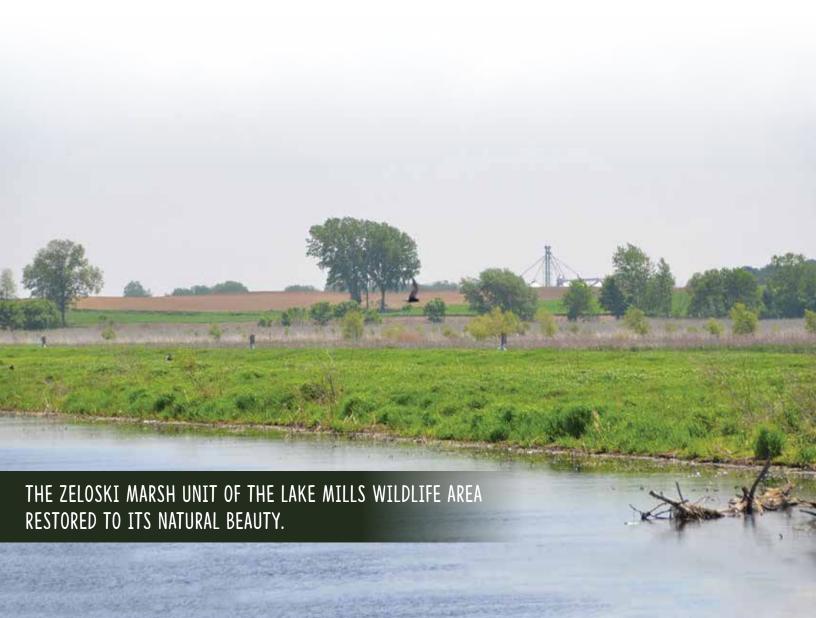






PARTNERING WITH THE DNR & MADISON AUDUBON SOCIETY Zeloski Marsh, Lake Mills Wildlife Area Restoration

The Zeloski Marsh Unit of the Lake Mills Wildlife Area in Jefferson County, Wisconsin, began in 1999 as a collaborative effort between the NRCS, the Wisconsin Department of Natural Resources (WDNR), and the Madison Audubon Society. The NRCS Wetland Reserve Program restored over 1,320 acres of marginal farmland, the core of the 3,300-acre Wildlife Area, which is now owned and managed by WDNR. Restoration efforts included filling ditches, breaking drainage tile, placing water control structures, and planting over 280 acres of prairie and 270 acres of sedge meadow. The Marsh is open to the public and offers many recreational opportunities including birding, biking, fishing, and is especially noted for waterfowl, pheasant, deer, and turkey hunting.







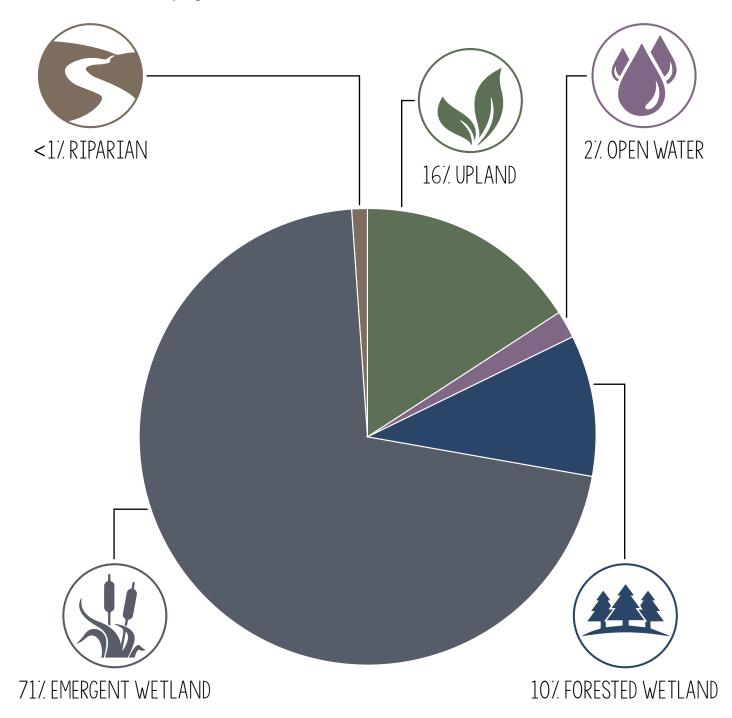






WISCONSIN HABITAT RESTORATION

NRCS conservation easements encompass a variety of habitat types. The majority of easement acres are emergent wetland, characterized by herbaceous (non-woody) water-loving plants and hydric soils. Wetland habitats are often associated with uplands, which act as a buffer to protect the lower-lying wetland and offers drier soils for different plant and animal species. Some easements contain forested wetland habitat, which is dominated by trees and shrubs. A small percentage of easement acreage is open water, which provides good habitat for waterfowl. A very small (<1%) portion of easement acres are riparian, or areas adjacent to rivers and streams. This chart displays both existing and restorable habitat types that are protected under either WRP, ACEP-WRE, or EWPP-FPE programs.



HOW TO APPLY

Landowners may apply for ACEP-WRE by contacting their local NRCS Service Center assigned to the county in which the land is located. To learn more, please visit www.wi.nrcs.usda.gov.









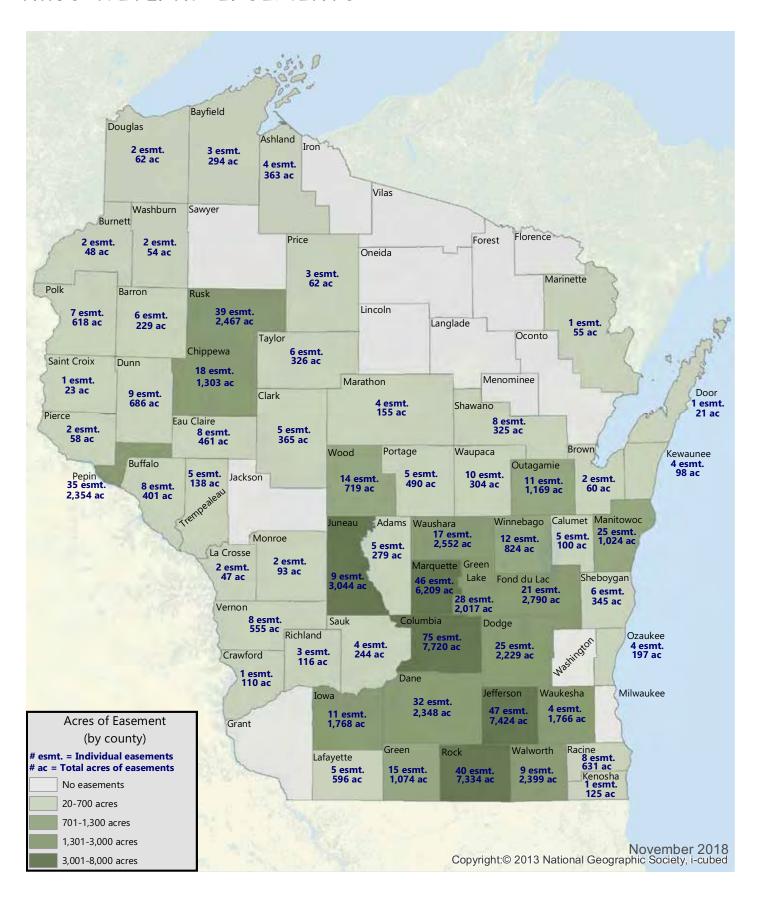
ACKNOWLEDGMENTS

NRCS would like to thank the following individuals for their photography featured throughout this publication: Matt Blohowiak, Becky Brathal, Garth Clark, Robert Geitner, Tivoli Gough, Dave Jorgenson, Greg Kidd, Jade Kochanski, Amanda Ludois, Jim Lutes, Stephanie McFarlane, Gretchen Oleson, Stephaney Olson, Julie Peterson, Ohne Raasch, Gary Shackelford, Scott Stipetich, and Nichol Swenson.

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